AXIS 210/210A/211/211A Installation Guide

This installation guide provides instructions for installing the AXIS 210/210A/211/211A Network Camera on your network. For all other aspects of using the product, please see the User's Manual, available on the CD included in this package, or from www.axis.com/techsup

Installation steps

1. Check the package contents against the list below.
2. Hardware overview. See page 4.
3. Install the hardware. See page 6.
4. Set an IP address. See page 7.
5. Set the password. See page 10.
6. Adjust the focus. See page 11.
7. Change the camera's web interface language (optional). See page 12.

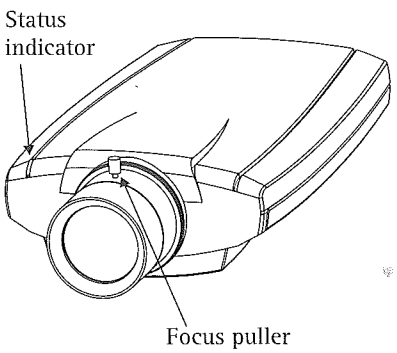
Important!
This product must be used in compliance with local laws and regulations.

Package contents

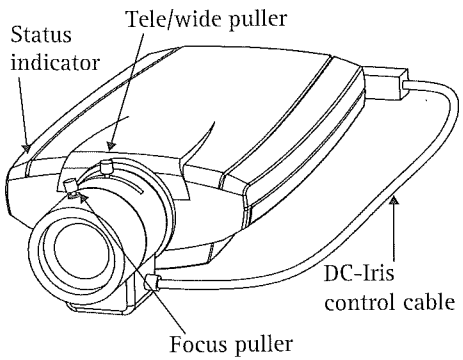
Item	Models/variants/notes
Network camera	• AXIS 210 • AXIS 210A: PoE, two-way audio and built-in microphone • AXIS 211: PoE, Varifocal DC-iris lens • AXIS 211A: PoE, two-way audio and built-in microphone, Varifocal DC-iris lens
PS-K indoor power supply (country specific)	Europe, UK, Australia, USA/Japan, Argentina, Korea
Camera stand	Supplied with mounting screws
Terminal block connector	4-pin connector block for connecting external devices to the I/O terminal connector
CD	Axis Network Video Product CD, including installation tools a nd other software, product documentation
Printed Materials	AXIS 210/210A/211/211A Installation Guide (this document) Axis Warranty Document

Hardware overview

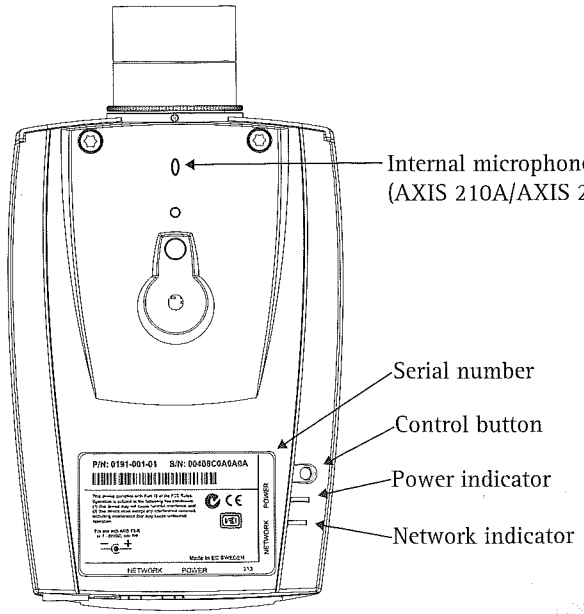
AXIS 210/AXIS 210A



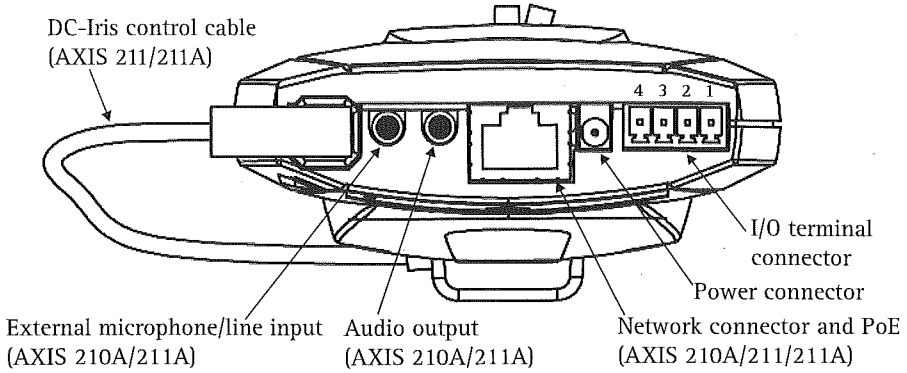
AXIS 211/AXIS 211A



Underside



Rear panel


DC-Iris control cable (AXIS 211/211A)
4 3 2 1
I/O terminal connector
Power connector
External microphone/line input (AXIS 210A/211A)
Audio output (AXIS 210A/211A)
Network connector and PoE (AXIS 210A/211/211A)

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Note:

Depending on the product version of your AXIS 210/210A/211/211A, you will see one of two different types of I/O ternminal connectors. See *I/O terminal connector,* on page 15.

Dimensions

AXIS 210/210A:
HxWxD = 38 x 88 x 157mm (1.5" x 3.4" x 6.2")
Weight (AXIS 210) = 305g (0.67lb) excl. power supply
Weight (AXIS 210A) = 325g (0.72lb) excl. power supply

AXIS 211/211A:
HxWxD = 38 x 95 x 178mm (1.5" x 3.7" x 7")
Weight = 345g (0.76lb) excl. power supply

Install the hardware

IMPORTANT! - The 210/210A is designed for indoor use only, and must always be positioned where it is not exposed to direct sunlight or strong halogen light, which can cause permanent damage to the camera's image sensor. Damage as a result of exposure to strong light is not covered by the Axis warranty.

IMPORTANT! - The AXIS 211/211A is designed for indoor and outdoor use. To use the camera outdoors, it must be installed in an approved outdoor housing. Please see www.axis.com for more information on outdoor housings.

Connect the camera

1. Connect the Network Camera to your network using a standard network cable. Using Shielded Twisted Pair (STP) cables is recommended.
2. Optionally connect external input/output devices, e.g. alarm devices. See page 15 for information on the terminal connector pins.
3. Optionally connect an active speaker and/or external microphone.
4. Connect power, using one of the methods listed below:
   - The supplied power connector.
   - Power over Ethernet (PoE). If available, this is automatically detected when the network cable is connected (see above).
   - The I/O terminal connector on the rear panel.
5. Check that the indicator LED:s indicate the correct conditions. See the table on page 16 for further details. Note that some LED:s can be disabled and may be unlit.

Assign an IP address

To make it accessible on the network, the AXIS 210/210A/211/211A must be assigned an IP address.

Depending on the number of cameras you wish to install, the recommended method for assigning IP addresses in Windows is either **AXIS IP Utility** or **AXIS Camera Management**. Use the method that best suits your purpose.

Both of these free applications are available on the Axis Network Video Product CD supplied with this product, or they can be downloaded from www.axis.com/techsup

Method	Recommended for	Operating system
AXIS IP Utility See page 8	Single camera Small installations	Windows
AXIS Camera Management See page 9	Multiple cameras Large installations Installation on a different subnet	Windows 2000 Windows XP Pro Windows 2003 Server

Notes:

- A network DHCP server is optional.
- The AXIS 210/210A/211/211A has the default IP address 192.168.0.90
- If assigning the IP address fails, check that there is no firewall blocking the operation.
- For other methods of assigning or discovering the IP address of the AXIS 210/210A/211/211A, e.g. in other operating systems, see page 10.

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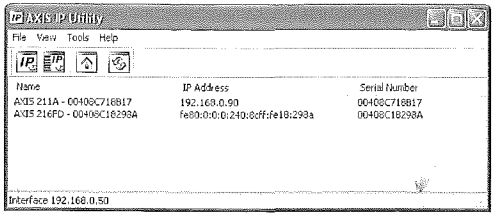
AXIS IP Utility - single camera/small installation

AXIS IP Utility automatically discovers and displays Axis devices on your network. The application can also be used to manually assign a static IP address.

Note that the computer running AXIS IP Utility must be on the same network segment (physical subnet) as the AXIS 210/210A/211/211A.



Automatic discovery

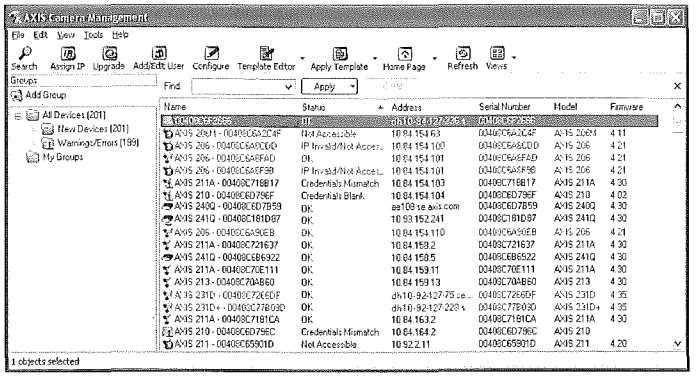
1. Check that the AXIS 210/210A/211/211A is connected to the network and that power has been applied.
2. Start AXIS IP Utility.
3. When the camera appears in the window, double-click it to open its home page.
4. See page 10 for instructions on how to assign the password.

Assign the IP address manually

1. Acquire an unused IP address on the same network segment as your computer.
2. Click the button **Assign new IP address using serial number** and enter the serial number and IP address for the AXIS 210/210A/211/211A. The serial number is located on the product label.
3. Click the **Assign** button and follow the instructions.
4. Click the **Home Page** button to access the camera's web pages.
5. See page 10 for instructions on how to set the password.

AXIS Camera Management - multiple cameras/large installations

AXIS Camera Management can automatically find and set IP addresses, show connection status, and manage firmware upgrades for multiple Axis video products.



Automatic discovery

1. Check that the camera is connected to the network and that power has been applied.
2. Start AXIS Camera Management. When the AXIS 210/210A/211/211A appears in the window, double-click it to open the camera's home page.
3. See page 10 for instructions on how to set the password.

Set the IP address in multiple devices

AXIS Camera Management speeds up the process of assigning IP addresses to multiple devices, by suggesting IP addresses from a specified range.

1. Select the devices you wish to configure (different models can be selected) and click the **Assign IP** button.
2. Select **Obtain IP addresses automatically (DHCP)**, click the **Update** button and the program will search in the specified range and suggest an IP address for each device.
   -or-
   Enter the range of IP addresses, the subnet mask and default router that devices can use and click the **Update** button.

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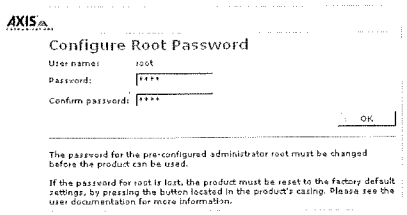
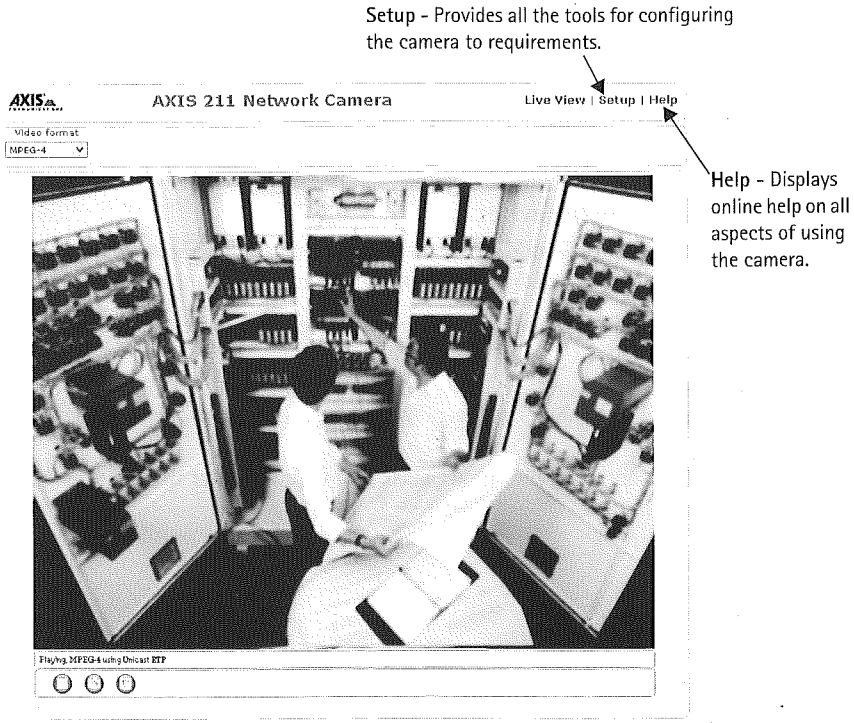
Set the password

When accessing the AXIS 210/210A/211/211A for the first time, the '**Configure Root Password**' dialog will be displayed.

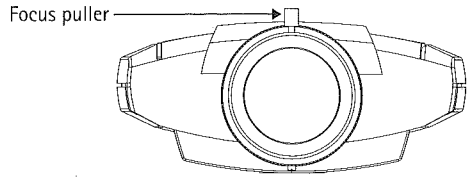

AXIS
Configure Root Password
User name: root
Password:
Confirm password:
OK
The password for the pre-configured administrator root must be changed before the product can be used.
If the password for root is lost, the product must be reset to the factory default settings, by pressing the button located in the product's casing. Please see the user documentation for more information.

1. Enter a password and then re-enter it, to confirm the spelling. Click **OK**.
2. Enter the user name root in the dialog. Note: The default administrator user name root cannot be deleted.
3. Enter the password as set above, and click **OK**. If the password is lost, the AXIS 210/210A/211/211A must be reset to the factory default settings. See page 17.
4. If required, click **Yes** to install AMC (AXIS Media Control), which allows viewing of the video stream in Internet Explorer. You will need administrator rights on the computer to do this.The Live View page of the AXIS 210/210A/211/211A is displayed, with links to the Setup tools, which allow you to customize the camera.


Setup - Provides all the tools for configuring the camera to requirements.
AXIS
AXIS 211 Network Camera
Live View | Setup | Help
Video format
MPEG-4
Help - Displays online help on all aspects of using the camera.
Playing MPEG-4 using Unicast RTP

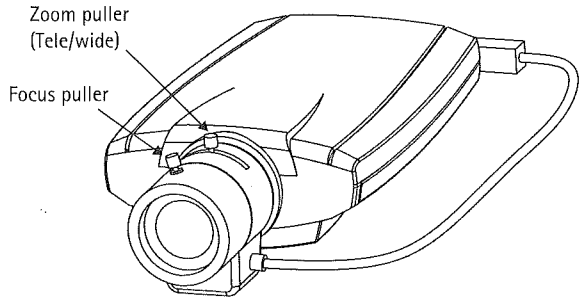
Adjust the image and focus

To focus the AXIS 210/210A, unscrew the focus puller on the lens. Adjust the focus as required. Re-tighten the focus puller.



To focus the AXIS 211/211A follow the instructions below.

1. From the **Basic Configuration** page in the setup tools, open the **Focus adjustment** page.
2. Set the DC-Iris to *Disabled* and click **Save**.
3. Unscrew the zoom puller on the lens by turning it anti-clockwise. Adjust the zoom setting as required. Re-tighten the zoom puller.



4. Unscrew the focus puller on the lens. Adjust the focus as required. Re-tighten the focus puller.
5. From the Focus adjustment page, set the DC-Iris to *Enabled* and click **Save**.

Note: The DC-Iris should always be disabled while focusing the camera. This opens the iris to its maximum, which gives the smallest depth of field and thus the best conditions for correct focusing. When the focus is set with this method it will then be maintained in any light conditions.

Accessing the AXIS 210/210A/211/211A from the Internet

Once installed, your AXIS 210/210A/211/211A is accessible on your local network (LAN). To access the camera from the Internet, network routers must be configured to allow incoming traffic, which is usually done on a specific port. Please refer to the documentation for your router for further instructions. For more information on this and other topics, visit the Axis Support Web at www.axis.com/techsup

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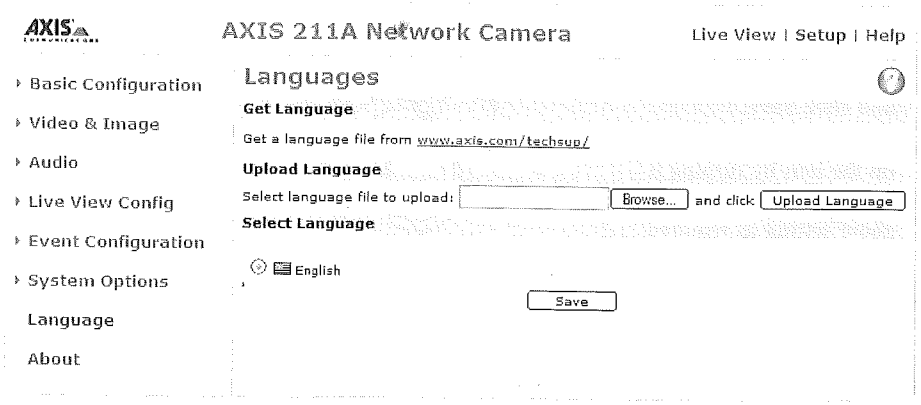
Language interface

After you have installed the Network Camera, you can download and install a language module to change the camera's web interface to a language other than English:

1. Go to **Setup** > **Language**.
2. Download the desired language from www.axis.com/techsup/ and save it temporarily to your computer.
3. Click the **Browse** button and locate the language file.
4. Click **Upload Language**. The language you uploaded will appear under **Select Language**.
5. Select the language you want to use with your Axis camera, and click **Save**.



Other methods of assigning the IP address

The table below shows the other methods available for assigning or discovering the IP address. All methods are enabled by default, and all can be disabled.

	Use in operating system	Notes
UPnP™	Windows	When enabled on your computer, the camera is automatically detected and added to "My Network Places."
Bonjour	MAC OSX (10.4 or later)	Applicable to browsers with support for Bonjour. Navigate to the Bonjour bookmark in your browser (e.g. Safari) and click on the link to access the camera's web pages.
AXIS Internet Dynamic DNS Service	All	A free service from Axis that allows you to quickly and simply install your camera. Requires an Internet connection with no HTTP proxy. See www.axiscam.net for more information.
ARP/Ping	All	See below. The command must be issued within 2 minutes of connecting power to the camera.
View DHCP server admin pages	All	To view the admin pages for the network DHCP server, please see the server's own documentation.

Set the IP address with ARP/Ping

1. Acquire an IP address on the same network segment your computer is connected to.
2. Locate the serial number (S/N) on the AXIS 210/210A/211/211A label.
3. Open a command prompt on your computer and enter the following commands:

Windows syntax	**Windows example**
`arp -s <IP Address> <Serial Number>` `ping -l 408 -t <IP Address>`	`arp -s 192.168.0.125 00-40-8c-18-10-00` `ping -l 408 -t 192.168.0.125`
UNIX/Linux/Mac syntax	**UNIX/Linux/Mac example**
`arp -s <IP Address> <Serial Number> temp` `ping -s 408 <IP Address>`	`arp -s 192.168.0.125 00:40:8c:18:10:00 temp` `ping -s 408 192.168.0.125`

4. Check that the network cable is connected to the camera and then start/restart the camera, by disconnecting and reconnecting power.
5. Close the command prompt when you see 'Reply from 192.168.0.125: ...' or similar.
6. In your browser, type in http://<IP address> in the Location/Address field and press Enter on your keyboard.

Notes:

- To open a command prompt in Windows: from the Start menu, select Run... and type cmd. Click OK.
- To use the ARP command on a Mac OS X, use the Terminal utility in Application > Utilities.

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Unit connectors

Network connector - RJ-45 Ethernet connector. Supports Power over Ethernet. Using Shielded Twisted Pair (STP) cables is recommended.

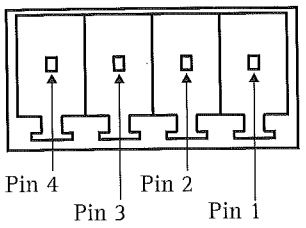
Power connector - Mini DC connector. 7-20V DC, max 5W.

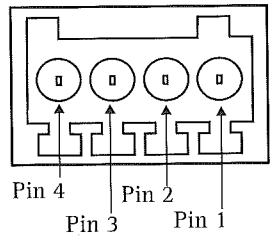
Audio in - 3.5mm input for a mono microphone, or a line-in mono signal (left channel is used from a stereo signal).

Audio out - Audio output (line level) that can be connected to a public address (PA) system or an active speaker with a built-in amplifier. A pair of headphones can also be attached. A stereo connector must be used for the audio out.

I/O terminal connector - Used in applications for e.g. motion detection, event triggering, time lapse recording, alarm notifications, etc. It provides the interface to:

- 1 transistor output - For connecting external devices such as relays and LEDs. Connected devices can be activated by AXIS VAPIX API, output buttons on the **Live View** page or by an **Event Type**. The output will show as active (shown under **Event Configuration > Port Status**) if the alarm device is activated.
- 1 digital input - An alarm input for connecting devices that can toggle between an open and closed circuit, for example: PIRs, door/window contacts, glass break detectors, etc. When a signal is received the state changes and the input becomes active (shown under **Event Configuration > Port Status**).
- Auxiliary power and GND.





Function	Pin number	Notes	Specifications
Transistor Output	4	Uses an open-collector NPN transistor with the emitter connected to the GND pin. If used with an external relay, a diode must be connected in parallel with the load, for protection against voltage transients.	Max load = 50mA Max voltage = 24V DC (to the transistor)
Digital Input	3	Connect to GND to activate, or leave floating (or unconnected) to deactivate.	Must not be exposed to voltages greater than 10V DC
7 - 20 V DC Power	2	Can be used to power auxiliary equipment.	Max load = 50mA
GND	1		

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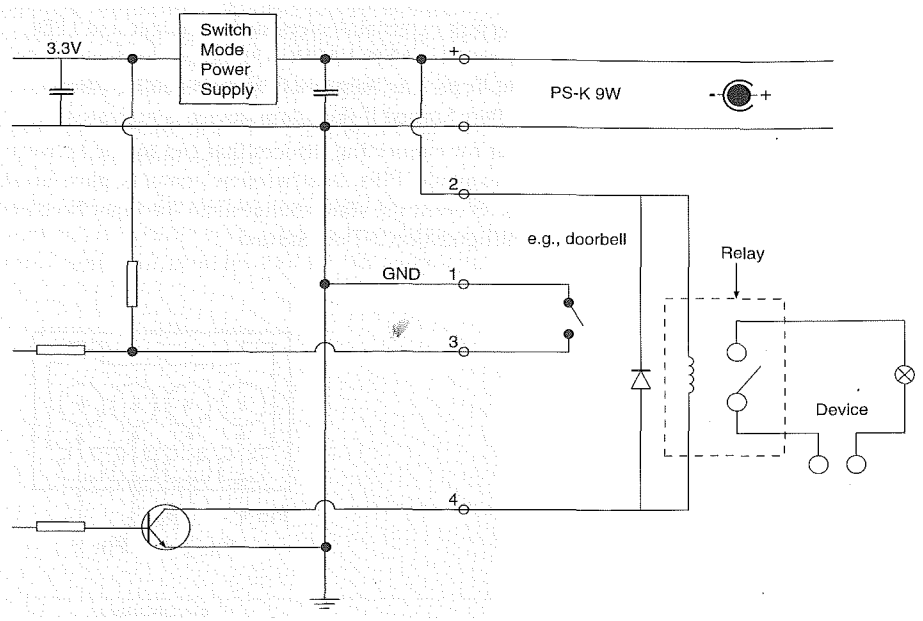
Connection diagram



LED indicators

LED	Color	Indication
Network	Green	Steady for connection to a 100 Mbit/s network. Flashes for network activity.
	Amber	Steady for connection to 10 Mbit/s network. Flashes for network activity.
	Unlit	No network connection.
Status	Green	Steady green for normal operation. Note: The Status LED can be configured to be unlit during normal operation, or to flash only when the camera is accessed. To configure, go to Setup > System Options > LED settings. See the online help files for more information.
	Amber	Steady during startup, during reset to factory default or when restoring settings.
	Red	Slow flash for failed upgrade.
Power	Green	Normal operation.
	Amber	Flashes green/amber during firmware upgrade.

Resetting to the Factory Default Settings

This will reset all parameters, including the IP address, to the factory default settings:

1. Disconnect power from the camera.
2. Press and hold the Control button and reconnect power.
3. Keep the Control button pressed until the Power indicator flashes amber (this may take up to 15 seconds).
4. Release the Control button. When the Power indicator displays green (which can take up to 1 minute) the process is complete and the camera has been reset.
5. Re-assign the IP address, using one of the methods described in this document.

It is also possible to reset parameters to the original factory default settings via the web interface. For more information, please see the online help or the user's manual.

Further information

The user's manual is available from the Axis Web site at www.axis.com or from the Axis Network Video Product CD supplied with this product.

Tip!
Visit www.axis.com/techsup to check if there is updated firmware available for your AXIS 210/210A/211/211A. To see the currently installed firmware version, see the Basic Configuration web page in the product's Setup tools.

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